Clearwater National Forest

2010 to 2012 Monitoring Report

Wildlife

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Elk

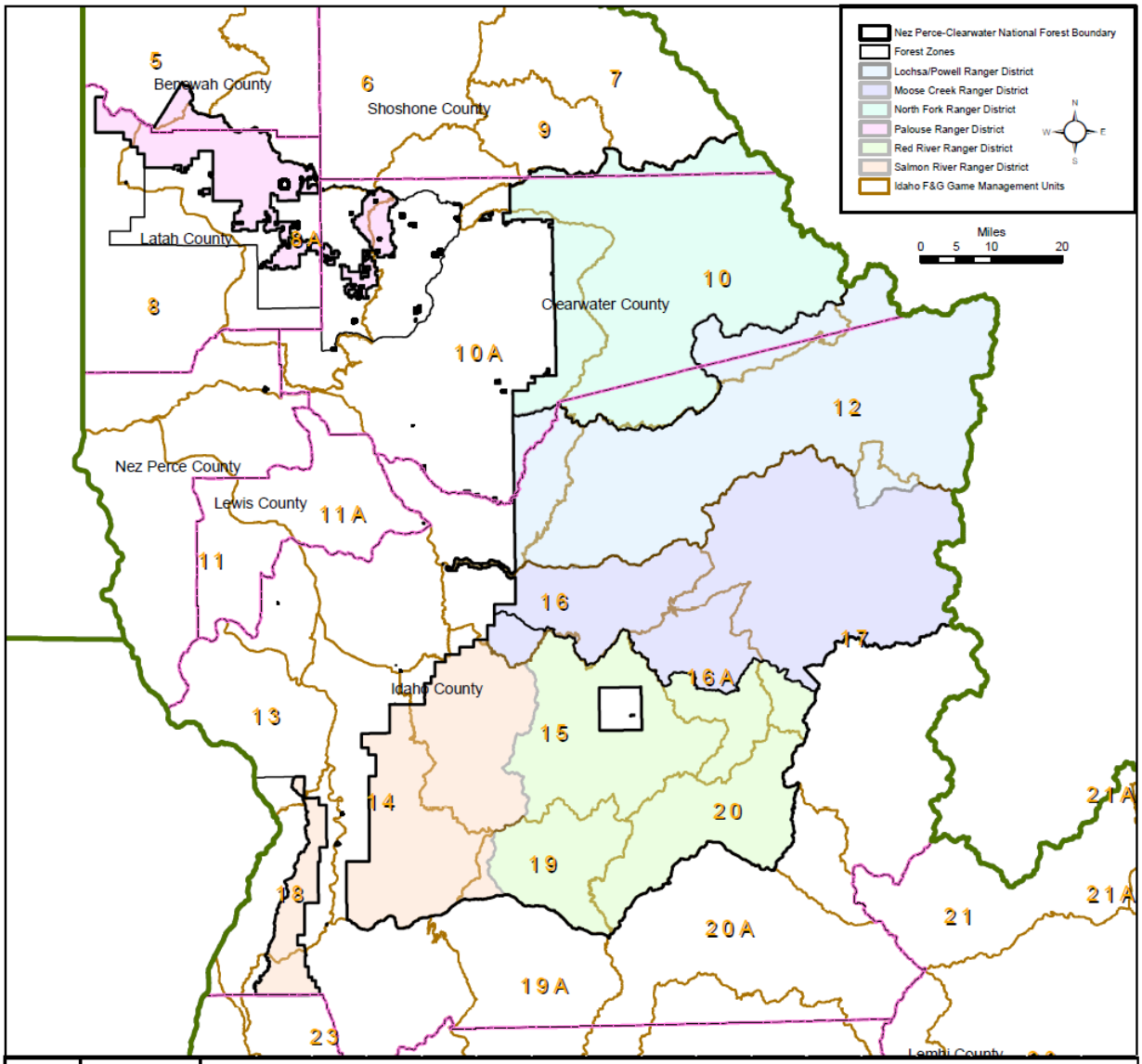
Population Trends and Elk Winter/Summer Range

Idaho Department of Fish and Game (IDFG) manages elk populations and harvest levels. The Forest works with IDFG to meet habitat objectives to sustain the population objectives set by the state. IDFG divides the state into Regions, and Elk Management Zones, which are Game Management Units (GMU) that have been grouped into zones. The Clearwater National Forest (CNF) is in Region 2, the Clearwater Region. Figure 1 shows the GMUs and what proportion of each is within Forest boundaries. Elk populations are monitored by IDFG with winter aerial surveys in most Elk Management Zones every 3-5 years. Harvest and antler point class in the harvest are monitored as well. The following Elk Management Zones are partially within the Forest: Palouse, Lolo, Dworshak, Elk City, and Selway.

IDFG issues a yearly Progress Report containing the results of elk surveys and inventories by Elk Management Zone. Also included in the report are climatic conditions, management objectives, historical perspectives, habitat, biological, inter-specific, and predation issues, and more. These reports can be found at fishandgame.idaho.gov.

Currently, the Palouse and Elk City Management Zones are meeting or exceeding population objectives, Dworshak Management Zone is stable, and the Lolo and Selway Management Zones are below population objectives.

Figure 1: IDFG Game Management Units on the Clearwater National Forest



Zone	Ranger District	Game Management Unit																	
		5	8	8A	10	10A	11A	12	13	14	15	16	16A	17	18	19	20	23
North	North Fork		159		667,811	107,212		2,365										
	Palouse	9,552	14,354	166,613		15,631												
	North Zone Totals	9,552	14,513	166,613	667,811	122,843	0	2,365	0	0	0	0	0	0	0	0	0	0
Central	Lochsa/Powell				74,953	90,143		758,200				2,406		25,377				
	Moose Creek					43		268			1,274	195,619	99,676	525,315				
	Central Zone Totals	0	0	0	74,953	90,186	0	758,468	0	0	1,274	198,025	99,676	550,692	0	0	0	0
South	Red River										296,541	535	79,146	31,278		149,869	223,835	
	Salmon River						140		2,602	220,856	217,693	384			50,994	15,321		24,470
	South Zone Totals	0	0	0	0	0	140	0	2,602	220,856	514,234	919	79,146	31,278	50,994	165,190	223,835	24,470
Total GMU Acreage		457,033	489,877	467,629	758,535	995,159	528,095	761,000	220,327	367,020	560,752	248,323	178,822	970,662	180,628	165,236	303,068	476,231
GMU Acreage Within Forest		9,552	14,513	166,613	742,764	213,029	140	760,833	2,602	220,856	515,508	198,944	178,822	581,970	50,994	165,190	223,835	24,470
% of GMU Acreage Within Forest		2%	3%	36%	98%	21%	0%	100%	1%	60%	92%	80%	100%	60%	28%	100%	74%	5%

Timber harvest, prescribed fire, and wildland fire create early successional habitat which can increase elk habitat potential (Lyon and Jensen 1980, Collins and Urness 1983, Leege 1979, Merrill and Peek

1982, DeByle et al. 1989, Jourdonnais and Bedunah 1990, Sachro et al. 2005). Road closures or decommissioning have significant potential to benefit elk through improving elk security (Christensen et al. 1993, Rowland et al. 2005). Elk forage can also be improved through spraying for invasive weeds and riparian habitat restoration. Table 1 lists the acres of elk habitat improved by timber harvest, prescribed and wildland fire. Miles of roads decommissioned and acres of invasive weed treatment are found in other sections of this report.

Table 1: Clearwater National Forest timber harvest, prescribed fire, and wildland fire acres from 2010-2012

Year	Regeneration Timber Harvest Acres	Prescribed Fire Acres	Wildland Fire Acres	Total Acres
2010	139	676	1,223	2,038
2011	1,173	1,132	8,371	10,676
2012	0	356	718	1,074
Total Acres	1,312	2,164	10,312	13,788
Average	437 acres per year	721 acres per year	3,437 acres per year	4,596 acres per year

Literature Cited

Christensen, A.G., L.J. Lyon, and J.W. Unsworth. 1993. Elk management in the Northern Region: considerations in forest plan updates or revision. Gen. Tech. Report INT-303. Ogden, UT. USDA Forest Service, Intermountain Research Station. 10 pp.

Collins, W.B. and P.J. Urness. 1983. Feeding behavior and habitat selection of mule deer and elk on Northern Utah summer range. Journal of Wildlife Management, Vol. 47, No. 3, pp. 646-663).

DeByle, N.V., P.J. Urness, D.L. Blank. 1989. Forage quality in burned and unburned aspen communities. USDA Forest Service.Odgen, UT. 8pp.Idaho Department of Fish and Game (IDFG). 2010. Statewide elk progress report, surveys, and inventories. IDFG, Boise, ID.

Idaho Department of Fish and Game (IDFG). 2011. Statewide elk progress report, surveys, and inventories. IDFG, Boise, ID.

Idaho Department of Fish and Game (IDFG). 2012. Statewide elk progress report, surveys, and inventories. IDFG, Boise, ID.

Idaho Department of Fish and Game (IDFG). 2013. Statewide elk progress report, surveys, and inventories. IDFG, Boise, ID.

Jourdonnais, C.S. and D.J. Bedunah. 1990. Prescribed fire and cattle grazing on elk winter range in Montana. Wildlife Society Bulletin. Vol. 18, No. 3. Pp. 232-240.

Leege, T.A. 1979. Effects of repeated prescribed burns on Northern Idaho elk browse. Northwest Science, Vol. 53, No. 2. Pp. 107-113.

Lyon, L.J. and C.E. Jensen. Management implicaitons of elk and deer use of clear-cuts in Montana.1980. Journal of Wildlife Management, Vol. 44, No. 2, pp. 352-362.

Merrill, E.H. and J.M. Peek. 1982. Shrub responses after fire in an Idaho ponserosa pine community. Journal of Wildlife Management. Vol. 46, No. 2. 7pp.

Rowland, M.M., M.J. Wisdom, B.K. Johnson, and M.A. Penninger. 2005. Effects of roads on elk: implications for management in forested ecosystems. Pages 42-52 *in* Wisdom, M.J., technical editor, The Starkey Project: a synthesis of long-term studies of elk and mule deer. From the 2004 Transactions of the North American Wildlife and Natural Resources Conference, Alliance Communications Group, Lawrence, Kansas.

Sachro, L.L., W.L. Strong, and C.C. Gates. 2005. Prescribed burning effects on summer elk forage availability in subalpine zone, Banff Natinal Park, Canada. Journal of Environmental Management 77. Pp. 183-193.

Moose

Moose populations in Idaho have expanded their range and numbers over the past few decades, moving westward into Washington and northeastern Oregon, and southward into Utah (IDFG 2012).

Moose in the IDFG Clearwater Region, which encompasses the Forest, are usually counted incidental to elk surveys. Many moose are not counted because elk surveys are seldom flown at elevation where moose normally winter. In addition, detectability of moose is poor because moose tend to prefer dense subalpine fir plant associations for winter habitat where they are less conspicuous to aerial observation. As a result, no comparative population data have been regularly collected. IDFG uses mandatory harvest reports and reported non-hunting mortalities to provide limited insight into moose population status and trends. Harvest levels, hunter success, and hunter days expended are determined from mandatory harvest reports. Hunter success rates and/or antler spread reflect moose population trends.

Harvest records and hunter reports indicate however, that moose populations in central Idaho Wilderness and other areas of the Clearwater continue to decline (IDFG 2013). Moose populations large enough to support hunts are found in most of the Clearwater Region except GMUs 11, 11A, 13, and 18 (IDFG 2013). Moose populations are in decline from the Lochsa River south, and especially in the Selway River and South Fork Clearwater drainages (GMUs 15, 16A,17,19,and 20). Hunting permits in these areas have been reduced. However, the moose populations on Forest that are adapted to early seral plant communities (except in winter), seem to be expanding. The Clearwater Region 2012 cumulative hunter success rate of 48% was lower than the previous 5-year (2007-2011) average of 51% (IDFG 2013). In 2011, the cumulative success rate of 51% was lower than the previous 5-year (2006-2010) average of 57% (IDFG 2012), and the 2010 cumulative success rate of 53% was lower than the previous 5-year (2006-2010) average of 57% (IDFG 2011).

Effects of the recent expansion of wolves on moose populations within the region are as yet undetermined. Research began in 2008 to monitor moose in GMU 10, of which 98% is on the CNF, to determine mortality rates and causes of death in the presence of wolves. This work is being done in conjunction with the ongoing wolf-elk interaction research in the Lolo Zone. Radio collars were placed on yearling or adult moose in the winter of 2008-2009, 2010, 2011, and 2012. While results are very preliminary, to date, wolves have not proven to be a significant cause of mortality on radio-collared adult moose (IDFG 2013). However, if early trends in wolf-caused calf mortality continue, calf survival and recruitment could be a serious issue (IDFG 2013). Harvest levels, hunter success, hunter days expended, and non-hunter mortality, all of which reflect population levels, can be found in the yearly Statewide Moose Progress Reports. These reports can be found at fishandgame.idaho.gov.

Literature Cited

Idaho Department of Fish and Game (IDFG). 2010. Statewide moose progress report, surveys, and inventories. IDFG, Boise, ID

Idaho Department of Fish and Game (IDFG). 2011. Statewide moose progress report, surveys, and inventories. IDFG, Boise, ID

Idaho Department of Fish and Game (IDFG). 2012. Statewide moose progress report, surveys, and inventories. IDFG, Boise, ID

Idaho Department of Fish and Game (IDFG). 2013. Statewide moose progress report, surveys, and inventories. IDFG, Boise, ID

White-tailed Deer

White-tailed deer are widely dispersed and occupy a variety of habitats, most of which is comprised of thick vegetative cover making most population enumeration techniques ineffective. IDFG has experimented with various techniques including aerial surveys, spot-light counts, and radio telemetry, among others. To date, no single population technique provides reliable and cost-effective measures of population demographics and abundance. IDFG's best tool for tracking population trends is mandatory harvest reports filed by hunters. IDFG has been monitoring harvest, which is an index to population abundance and distribution, since 1975. Additionally, species-specific deer hunter participation information has been collected since 2005 and provides additional information on catch per-unit-effort indices (IDFG 2013).

Based on harvest reports for the past 20 years, white-tailed deer populations in all CNF management units appear to be thriving (IDFG White-tailed deer Progress Reports 1993-2013). White-tailed deer hunter success rate was 34% for 2010, 38% in 2011, and 37% in 2012 (IDFG 2011, 2012, 2013).

Literature Cited

Idaho Department of Fish and Game (IDFG). 2011. Statewide white-tailed deer progress report, surveys, and inventories. IDFG, Boise, ID

Idaho Department of Fish and Game (IDFG). 2012. Statewide white-tailed deer progress report, surveys, and inventories. IDFG, Boise, ID

Idaho Department of Fish and Game (IDFG). 2013. Statewide white-tailed deer progress report, surveys, and inventories. IDFG, Boise, ID

Belted Kingfisher

The United States Geological Survey (USGS) Patuxent Wildlife Research Center presents population change information from the North American Breeding Bird Survey for more than 400 species of North American Birds (Sauer et al. 2014). The trend for belted kingfishers from 1966 to 2012 for the state of Idaho is slightly declining. The trend estimate from 2010 to 2012 for the state of Idaho is -1.49. The belted kingfisher is common along streams and shorelines across the Forest, feeds almost entirely on aquatic prey, and nests in earthen banks. The protections to riparian habitats provided by PACFISH

(Pacific Anadromous Fish Strategy)/INFISH (Inland Fish Strategy) management practices in Riparian Habitat Conservation Areas likely is a benefit to belted kingfisher habitat.

Literature Cited

Sauer, J.R., J.E. Hines, J.E Fallon, K.L. Pardieck, D.J. Ziolkowski, Jr., and W.A. Link. 2014. The North American Breeding Bird Survey, Results, and Analysis 1966-2013. Version 01.30.2015. USGS Patuxent Wildlife Research Center, Laurel, MD.

Pileated Woodpecker and Goshawk

The United States Geological Survey (USGS) Patuxent Wildlife Research Center presents population change information from the North American Breeding Bird Survey (BBS) for more than 400 species of North American Birds (Sauer et al. 2014). The trend for pileated woodpeckers from 1966 to 2011 and from 1966 to 2012 for the state of Idaho is slightly declining. The trend for 2010 to 2012 is also slightly declining.

Landbird surveys are conducted on the Forest by the Intermountain Bird Observatory as part of the Integrated Monitoring in Bird Conservation Regions (IMBCR) program coordinated by Rocky Mountain Bird Observatory (RMBO) and partners. Fifteen transects are surveyed yearly on the CNF beginning in 2010, providing estimates of pileated woodpecker occupancy (White et al. 2013). Additionally, a study of the distribution and area of occupancy of pileated woodpeckers was conducted in 2012 in the Clearwater and Nez Perce NFs within the Selway-Middle Fork Clearwater Collaborative Forest Landscape Restoration project area. Pileated woodpeckers were found to be well distributed throughout the area (Baumgardt et al. 2014). Of a total of 35 units sampled, pileated woodpeckers were detected in 26 units, which leads to a corrected estimated occupancy of 70% (Baumgardt et al. 2014).

Habitat relationship models were developed by the Region 1 Forest Service for a conservation assessment for the northern goshawk, black-backed woodpecker, Flammulated owl, and pileated woodpecker, in 2005,and amended in 2006 and 2008 (USDA Forest Service 2005, amended 2006, Bush and Lundberg 2008). Habitat estimates were derived from FIA data (The U.S. Forest Service's Forest Inventory and Analysis National Program for data collection on the health of forests) (Berglund et al. 2008, Bush et al. 2006), using these models. The model indicates that the CNF has approximately 268,718 acres of nesting habitat, and 338,680 acres of foraging habitat well distributed to support pileated woodpeckers (Bush and Lundberg 2008).

The BBS reports the trend for northern goshawk in Idaho from 1966 to 2011 and from 1966 to 2012 is slightly declining (Sauer et al. 2014). The trend estimate for 2010 to 2012 is stable. However, the sample size for northern goshawks in these surveys is small, so these results are not conclusive.

The Region 1 habitat relationship model for northern goshawk described above estimates 31,801 acres of nesting habitat, and 575,596 acres of foraging habitat on the CNF well distributed to support northern goshawk (Bush and Lundberg 2008).

A 2005 survey of the frequency of northern goshawk presence in the Northern region found that based on a random sample (n=114) of 12,350 sampling units, goshawks were detected in 39% of available habitat in road-accessible areas in Region 1 (Kowalski 2005, Brewer et al. 2009). The results suggest that goshawks are relatively common and widely distributed in the roaded, managed portions of National Forest lands. In 2001 to 2003, Moser studied northern goshawk reproduction on 21 territories on the Forest (Moser 2007, Moser and Garton 2009).

In addition, field inventory work for goshawks has occurred periodically across the Forest throughout 2010 to 2012 in various drainages. Individual goshawks as well as nests have been found throughout the Forest.

Literature Cited

Baumgardt, J.A., J.D Sauder, and K.L. Nicholson. 2014. Occupancy modeling of woodpeckers: maximizing detections for multiple species with multiple scales. Journal of Fish and Wildlife Management 5(1):198-207.

Berglund, Doug, R. Bush, R. Lundberg. Region One Vegetation Council Existing Vegetation Classification System and Adaptations to Mapping Projects. Region 1 Vegetation Classification, Inventory, and Analysis Report #08-02, 2008. http://fsweb.r1.fs.fed.us/forest/inv/classify/r1_ex_veg_classification.pdf

Brewer, L.T., r. Bush, J.E. Canfield, and A.R. Dohmen. 2009. Northern goshawk Northern Region Overview: key findings and project considerations. USDA Forest Service, Region 1, Missoula, MT.

Bush, R. and R. Lundberg. 2008. Wildlife habitat estimate update for the Region 1 Conservation Assessment. USDA Forest Service, Region 1, Missoula, MT. Numbered Report 08-04v1.0

Bush, Renate, D. Berglund, A. Leach, R. Lundberg, J.D. Zeiler. Overview of R1-FIA Summary Database, Region 1 Vegetation Classification, Inventory, and Analysis Report #06-02, 2006. http://fsweb.r1.fs.fed.us/forest/inv/fia_data/r1_fia_sdb.pdf

Kowalski, S. 2005. Frequency of Northern Goshawk Presence in the Northern Region 2005 Survey. USDA Forest Service, Region 1, Missoula, MT.

Moser, B.W. 2007. Space us and ecology of goshawks in northern Idaho (dissertation). University of Idaho, Moscow, ID.

Moser, B.W. and E. O. Garton. 2009. Short-term effects of timber harvest and weather on northern goshawk reproduction in northern Idaho. Journal of Raptor Research 43(1):1-10.

Sauer, J.R., J.E. Hines, J.E Fallon, K.L. Pardieck, D.J. Ziolkowski, Jr., and W.A. Link. 2014. The North American Breeding Bird Survey, Results, and Analysis 1966-2013. Version 01.30.2015. USGS Patuxent Wildlife Research Center, Laurel, MD.

USDA Forest Service – Northern Region. 2005 (amended March 6, 2006). F.B. Samson. A Conservation Assessment of the Northern Goshawk, Blacked-backed Woodpecker, Flammulated Owl, and Pileated

Woodpecker in the Northern Region, USDA Forest Service. Unpublished report on file, Northern Region, Missoula, Montana, USA.

White, C. M., N. J. Van Lanen, D.C. Pavlacky Jr., J. A. Blakesley, R. A. Sparks, M. F. McLaren, J. J. Birek and D. J. Hanni. 2013. Integrated Monitoring in Bird Conservation Regions (IMBCR): 2012 Annual Report. Rocky Mountain Bird Observatory. Brighton, Colorado, USA.

Pine Marten (referred to as American Marten)

Marten populations are well documented throughout the CNF. Marten population densities and trends are difficult to evaluate: long term data sets are rare, and populations often fluctuate, partly due to variable trapping pressure. IDFG manages marten populations primarily using licensing, harvest seasons, and harvest limits. Mandatory harvest reports include Catch-Per-Unit-Effort, which measures the harvest per unit of time and is useful in predicting population trends. Statewide trends for Catch-Per-Unit-Effort from 2002 to 2012 have steadily declined, from 4.14 to 2.15 (IDFG 2014).

During winter 2002-2003, the IDFG initiated a pilot study for a statewide monitoring effort to collect basic information on forest carnivore occurrence, distribution, and persistence, using snow track surveys. The surveys were performed throughout the state during the winter of 2003-2004, 2004-2005, and 2005-2006, with variable effort dependent on snow conditions. In the Clearwater Region, multiple marten were detected each year (IDFG 2006).

Between 2002 and 2006 a study on fishers was conducted in the Clearwater sub-basin and eastern slope of the Bitterroot-Selway Ecosystem in Idaho and Montana (Schwartz et al. 2013) in which marten were detected. Also, from 2004 to 2011, the USFS Northern Region systematically surveyed for fisher with hair snares using a 5 x 5 mile grid in the Northern Rockies (Lewis and Hahn 2012) and marten were detected.

In an IDFG Clearwater Region study of fisher ecology from 2006-2010 in the Clearwater Region (Sauder and Rachlow 2014, 2015) marten were frequently detected.

Marten have also been detected on the adjacent Nez Perce NF during snow track surveys completed in 2007 (Ulizio et al. 2007) and 2009 using protocol developed by Squires et al. (2004). Hair snare surveys (5 transects) that were completed during summer and fall of 2008 on the Forest following the protocol established by McKelvey et al. (1999) (Bonn 2008), also detected marten.

Literature Cited

Bonn, J. 2008. Nez Perce National Forest 2008 Lynx Hair Snare Surveys, Final Report. Nez Perce National Forest.

Idaho Department of Fish and Game (IDFG). 2006. Idaho Snow Track Survey Winter 2006 Final Report. IDFG, Nampa, ID.

Idaho Department of Fish and Game (IDFG). 2014. Statewide furbearer progress report, surveys, and inventories. IDFG, Boise, ID

McKelvey, K.S., J.J. Claar, G.W. McDaniel and G. Hanvey. 1999. National lynx detection protocol. USDA Forest Service Forest Service, Rocky Mountain Research Station, Missoula, Montana, USA.

Squires, J.R., K.S. McKelvey, and L.F. Ruggiero. 2004. A snow-tracking protocol used to delineate local lynx, *Lynx Canadensis*, distributions. Canadian Field-Naturalist 118:583-589.

Ulizio, T., J. Squires and J. Claar. 2007. Nez Perce National Forest 2007 Lynx Surveys National Report. USFS Rocky Mountain Research Station, Missoula, MT.

Gray Wolf

On May 5, 2011, the Fish and Wildlife Service removed gray wolves in a portion of the Northern Rocky Mountain Distinct Population Segment (DPS) encompassing Idaho, Montana and parts of Oregon, Washington and Utah from the Federal List of Endangered and Threatened Wildlife (USFWS 2011). Post delisting monitoring requires each delisted state to submit an annual report to the U.S. Fish and Wildlife Service (USFWS et al. 2012).

IDFG currently oversees management of wolves in Idaho and coordinates among agencies to fulfill obligations under the revised 10(j) rule, Endangered Species Act, and 2008-2012 Idaho Wolf Population Management Plan. The Idaho wolf population has continued to expand in size and distribution since initial reintroductions in 1995, reaching Endangered Species Act recovery goals by the end of 2002 (IDFG and Nez Perce Tribe 2013). Wolf monitoring and management activities have been reported by Wolf Management Zones (WMZs) since 2008. Four WMZs, each of which include several GMUs are partially on the Forest: Dworshak/Elk City, Palouse/Hells Canyon, Lolo, and Selway.

The 2012 Idaho Wolf Monitoring Progress Report (IDFG 2013) estimated the number of wolves in Idaho at year-end, 1995-2012. Annual numbers were based on best information available and were retroactively updated as new information was obtained. The estimated number of wolves in Idaho from 2010 to 2012 is listed in Table 2 (IDFG 2013).

Table 2: Estimated Number of wolves in Idaho, 2010-2012.

Year	2010	2011	2012
No. of Wolves	777	768	683

IDFG manages the number of wolves through harvest and control (agency removal and legal take). Statewide progress reports are available at fishandgame.idaho.gov and includes a listing of population and pack numbers by Wolf Management Zone from 2008 to 2012.

Literature Cited

Idaho Department of Fish and Game and Nez Perce Tribe. 2013. 2012 Idaho wolf monitoring progress report. IDFG, Boise, ID; Nez Perce Tribe Wolf Recovery Project, Lapwai, ID.

U.S. Fish and Wildlife Service, Idaho Department of Fish and Game, Montana Fish, Wildlife & Parks, Nez Perce Tribe, National Park Service, Blackfeet Nation, Confederated Salish and Kootenai Tribes, Wind River Tribes, Washington Department of Fish and Wildlife, Oregon Department of Fish and Wildlife, Utah Department of Natural Resources, and USDA Wildlife Services. 2012. Northern Rocky Mountain Wolf Recovery Program 2011 Interagency Annual Report. M.D. Jimenez and S.A. Becker, eds. USFWS, Ecological Services, 585 Shepard Way, Helena, Montana, 59601.

USFWS (US Fish and Wildlife Service). 2011. Endangered and Threatened Wildlife and Plants; Reissuance of Final Rule To Identify the Northern Rocky Mountain Population of Gray Wolf as a Distinct Population Segment and To Revise the List of Endangered and Threatened Wildlife. Federal Register: Vol. 76, No. 87, 25590-25592.

Bald Eagle

The Clearwater National Forest Plan (1987) lists the bald eagle as endangered, and a Management Indicator Species. In 1995 the U.S. Fish and Wildlife Service down listed the bald eagle to threatened, and on June 28, 2007 the final decision was made to delist the bald eagle from the Endangered Species Act (USFWS 2007). Midwinter bald eagle surveys have been conducted nationally since the 1980's. The surveys have been conducted under the oversight of several federal agencies including the Bureau of Land Management (1992), National Biological Survey (1993-1996), U.S. Geological Survey (U.S.G.S.; 1997-2007), and most recently U.S. Army Corps of Engineers (U.S.A.C.E.; 2008 to present) (Eakle et al. 2015).

As part of this national effort, the state of Idaho has 78 routes, 4 of which are on the Nez Perce and Clearwater NFs. Since 1986 to 2010, the trend of the bald eagle winter population in the state of Idaho has increased by 1.2% (Eakle et al. 2015). Data for the NPNF and the CNF is available for 2005, 2011, and 2012. Table 2 lists the results of the survey for routes on the Forest for 2005, 2011, and 2012. The 2005 results were included in the calculation of statewide population trend from 1986-2010. Population trend for 2011 and 2012 has not yet been calculated. Note: the Little Salmon River route, which goes from the Salmon River to Hazard Creek, is on an adjacent sub basin not within the Forests.

Table 2: Number of bald eagles detected by survey route

	Total Bald Eagles Counted 2005	Adult Bald Eagles Counted 2005	Immature Bald Eagles Counted 2005
White Bird Creek-Vinegar Creek	4	4	0
Farrens Creek-Red River	2	2	0
Middle Fork Clearwater, Clear Creek -Selway	4	3	1

	Total Bald Eagles Counted 2011	Adult Bald Eagles Counted 2011	Immature Bald Eagles Counted 2011
White Bird Creek-Vinegar Creek	15	13	2
Farrens Creek –Red River	5	5	0
Middle Fork Clearwater, Clear Creek -Selway	24	14	10
Lochsa River, Lowell – Powell RS	1	1	0
Little Salmon River	1	1	0

	Total Bald Eagles Counted 2012	Adult Bald Eagles Counted 2012	Immature Bald Eagles Counted 2012
White Bird Creek-Vinegar Creek	12	9	3
Farrens Creek –Red River	6	6	0
Middle Fork Clearwater, Clear Creek -Selway	10	8	2
Lochsa River, Lowell – Powell RS	1	1	0
Little Salmon River	2	1	1

Literature Cited

Eakle, W.L., L. Bond, M.R. Fuller, R.A. Fisher and K. Steenhof. 2015. Wintering Bald Eagle count trends in the conterminous United States, 1986-2010. Journal of Raptor Research 49(3): In Press.

USFWS (US Department of the Interior Fish and Wildlife Service). 2007. Endangered and Threatened Wildlife and Plants; Removing the Bald Eagle in the Lower 48 States from the List of Endangered and Threatened Wildlife. Federal Register. Vol. 172, No. 130, 37346-37372.

Grizzly Bear

The grizzly bear currently occurs in western Canada, Alaska, extreme northern Washington, Idaho, Montana, and Wyoming. Within Idaho, there are 2 distinct populations, one in the north and another in the southeast. The northern population occurs in the Selkirk and Cabinet Mountains. The population in southeastern Idaho is centered in the greater Yellowstone Ecosystem. Both Idaho populations of grizzly bear are slowly increasing (IDFG 2005).

There is potential habitat for grizzly bear on the Forest. Officially, the USFWS does not consider any portion of the Forest to be permanently occupied by grizzly bears at this time, and there has been no evidence of a population.

In the 5 year status review by the U.S. Fish and Wildlife Service dated August 2011, it states on page 31: ***Bitterroot Ecosystem***. Although one male grizzly bear was killed within the Bitterroot Experimental Population Area in 2007, we have yet to document a population or any female bears within the BE. Because we have not documented a population or any female bears in the BE, we view the BE as currently unoccupied as per the definition of a population of grizzly bears in the Bitterroot EIS (FWS 2000).

The 5 year review also states that the estimated grizzly bear population size of the Bitterroot recovery zone is 0. Following the 2007 detection, the Bitterroot Ecosystem was systematically surveyed for grizzly bears during 2008 and 2009 using barbed wire DNA hair corrals and cameras. No grizzly bears were detected in the study area during the sampling period (Servheen and Shoemaker 2010).

Literature Cited

Idaho Department of Fish and Game. 2005. Idaho Comprehensive Wildlife Conservation Strategy. Idaho Conservation Data Center, Idaho Department of Fish and Game, Boise, ID. http://fishandgame.idaho.gov/cms/tech/CDC/cwcs.cfm

Servheen, C. and R. Shoemaker. 2010. Bitterroot Mountains Bear DNA and Camera Survey: 2008-2009, Final Report.

U.S. Fish and Wildlife Service. 2000. Record of decision and statement of findings and final rule on establishment of a nonessential experimental population of grizzly bears in Bitterroot Area of Idaho and Montana.

U.S. Fish and Wildlife Service. 2011. Grizzly Bear (*Ursus arctos horribilis*) 5-Year Review: Summary and Evaluation. USFWS, Grizzly Bear Recovery Office. Missoula, MT.

Canada Lynx

The U.S. Fish and Wildlife Service (FWS) listed Canada lynx as a threatened species under the Endangered Species Act (ESA) in March 2000 (USFWS 2000). While lynx have occasionally been sited on the Forest, currently, due to the infrequent nature of lynx observations, no evidence exists of a resident lynx population or reproduction on the Clearwater National Forest.

During winter 2002-2003, the IDFG initiated a pilot study for a statewide monitoring effort to collect basic information on forest carnivore occurrence, distribution, and persistence, using snow track surveys. The surveys were performed throughout the state during the winter of 2003-2004, 2004-2005, and 2005-2006, with variable effort dependent on snow conditions. In the Clearwater Region, no lynx were detected (IDFG 2006).

There have been several additional surveys targeting forest carnivores on the Forest: between 2002 and 2006 fishers were studied in the Clearwater sub basin (Schwartz et al. 2013); Region 1 fisher monitoring in 2004 to 2011 on a systematic 5 x 5 mile grid (Lewis and Hahn 2012); a fisher ecology study from 2006-2010, much of which was on the CNF (Sauder and Rachlow 2014, 2015); and the 2008-2009 Bitterroot Ecosystem systematic survey for grizzly bears, which included parts of the CNF (Servheen and Shoemaker 2010). IDFG also does yearly aerial surveys on the Forest, primarily for big game monitoring. Throughout all of this survey work, there has been only 3 sitings of lynx, in March of 2005 by Michael Schwartz, that were verified. In 2010 a collared lynx was found dead outside of Kamiah. This animal had been transplanted to Colorado. Otherwise, there has been no evidence of lynx presence on the Forest.

Lynx are wide-ranging animals, and given the extensive surveys for other species using hair snares, snow track surveys, and camera stations conducted on the Clearwater NF presence of a population should be evident given the vast network of roads and trails. While lynx have occasionally been sited on the CNF, currently, due to the infrequent nature of lynx observations, no evidence exists of a resident lynx population or reproduction on the Clearwater NF.

Literature Cited

Bonn, J. 2008. Nez Perce National Forest 2008 Lynx Hair Snare Surveys, Final Report. Nez Perce National Forest.

McKelvey, K.S., J.J. Claar, G.W. McDaniel and G. Hanvey. 1999. National lynx detection protocol. USDA Forest Service, Rocky Mountain Research Station, Missoula, Montana, USA.

Squires, J.R., K.S. McKelvey, and L.F. Ruggiero. 2004. A snow-tracking protocol used to delineate local lynx, *Lynx Canadensis*, distributions. Canadian Field-Naturalist 118:583-589.

Squires, J.R., L.E. Olsen, D.L. Turner, N.J. DeCesare, and J.A. Kolbe. 2012. Estimating detection probability for Canada lynx *Lynx canadensis* using snow-track surveys in the northern Rocky Mountains, Montana, USA. Wildlife Biology18:215-224.

Stone, D., S. Holland, M. Dressen, J. Bonn, J. Sauder, J. Squires and M. Schwartz. 2013. Nez Perce National Forest Multi-Species Meso-Carnivore Surveys Winter 2013 Final Report. Nez Perce National Forest.

Ulizio, T., J. Squires and J. Claar. 2007. Nez Perce National Forest 2007 Lynx Surveys National Report. USFS Rocky Mountain Research Station, Missoula, MT.

USFWS (US Department of the Interior Fish and Wildlife Service). 2000. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Contiguous U.S. Distinct Population Segment of the Canada Lynx and Related Rule. Federal Register. Vol. 68, No. 128, 40076-40101.

Northern Idaho Ground Squirrel

The Northern Idaho Ground Squirrel occurs in dry meadows bordered by ponderosa pine and Douglas-fir forests. The known occurrences in Idaho occur in Adams and Valley counties of western Idaho. The farthest north occurrence of Northern Idaho ground squirrel was found on the Payette National Forest at about 7,500 feet elevation at Lick Creek lookout. The FWS determined that similar habitat may continue to the north into the Rapid River drainage, including the most southwest portion of the Nez Perce National Forest. Although the habitat conditions necessary to support Northern Idaho ground squirrel do not appear to occur on the Forest, surveys were done on a series of grassy openings with the potential for habitat similar to the Lick Creek lookout in 2014. Northern Idaho ground squirrels were not found (Snyder and Whitted 2014). Based on this evidence and the fact that there have been no observations of this species in Idaho county, it has been determined that the species does not occur on the Forest.

Literature Cited

Snyder, T. and R. Whitted. 2014. Northern Idaho ground squirrel surveys on the Nez Perce-Clearwater National Forests. USFS, Kamiah, ID.